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The Impact of Pro-life Education on Abortion Attitude Among College Students in Nepal

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THE IMPACT OF PRO-LIFE EDUCATION ON ABORTION ATTITUDE AMONG COLLEGE STUDENTS IN NEPAL

A thesis submitted in partial fulfillment

of the requirements for the degree of

Master of Science in Nursing

By

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Maya Shrestha

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MASTER OF SCIENCE IN NURSING.

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Committee Chair	Professor
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Abstract

Since the legalization of abortion in Nepal in 2002, the number of induced abortions has increased. Various national and international organizations have been giving greater attention and effort to enhancing the public's knowledge on legal abortion. However, little research on pro-life education and its impact on abortion attitude have been conducted in Nepal and around the world at large. The purpose of this research was to explore the impact of pro-life education on abortion attitude among college students in Nepal.

This one group pretest posttest study was based on the cognitive dissonance theory (CDT) which postulates that education brings attitude change. The study was conducted in Kathmandu, Nepal from December 18th - 24th, 2012. The research participants consisted of 145 Nepali college students aged 18 years and above from three colleges in Kathmandu city.

Descriptive statistics were used to analyze the demographic characteristics of the participants. The results of paired t test showed that there was a significant difference (t= -14.63, df= 144, p=0.000, α=0.05) between the pre-test ($\bar{x}$=2.91, SD ±.27) and the post-test (x= 3.22, SD± .24) after pro-life education.

This study supports the hypothesis that pro-life education brings change in abortion attitude. In addition, this study supports the application of CDT on pro-life education. Further research is recommended concerning 1) the impact of pro-life education on abortion attitude and behavior change among various population groups, 2) concept analysis on the term "pro-life" and 3) testing of pro-life attitude scale that was developed for

this study is recommended. The result of this study encourages health care providers and pro-life organizations to continue pro-life education with the hope of reducing the number of abortions worldwide.

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Acknowledgment

I am grateful for the opportunity to conduct my thesis in Nepal. I am thankful for my parents and siblings for their love, support, and encouragement as I pursued a Master of Science in Nursing degree. I would like to express my sincere appreciation to my family, friends, and church members in Nepal and the United States for their prayer, support, and encouragement during the research process. Special thanks to brother Elisha Soma Rai, Executive Director of Voice of Fetus (VoF)-Nepal for being the community resource during my intervention in Nepal. I am humbled by the wonderful works by VoF for the cause of life. Many thanks go to Noble College, Morgan International College, and Om Health Campus and their students for being a part of my research. My sincere appreciations go to my advisor and research chair member Dr. ChuYu Huang and research committee member Dr. Sharon K Christman for their time, expertise, guidance, encouragement, and support throughout the research process and beyond. I also want to thank the Cedarville University School of Nursing for their constant encouragement and support throughout my education here.

Chapter 1

Introduction

The World Health Organization (WHO) estimates 1 out of 5 pregnancies ends in induced abortion, resulting in approximately 43.8 million induced abortions worldwide each year. In Southeast Asia alone, 36 per 1,000 women 15 - 44 years of age choose induced abortion (Sedgh, Henshaw, Singh, Ahman, & Shah, 2007). Nepal,is one of the Southeast Asian countries affected by the issue of induced abortions. Until 2002, Nepal's legal code known as Muluki Ain forbade abortion except when the woman's life was at risk. Despite this restriction, people continued to pursue illegal induced abortions resulting in Nepal's maternal mortality ratio of 539 deaths per 100,000 live births (Samandari, Wolf, Basnett, Hyman & Andersen, 2007).With the aim of preventing such unsafe abortions and under the heavy influence of the United States Agency for International Development (USAID) and International non-governmental organization (NGO), the access to abortion in Nepal was legalized in 2002 (Samandari et al., 2007).

Nepal's 2002 abortion law was further modified in 2007 by giving liberal access to abortion up to 12 weeks gestation, at any time during pregnancy if the mental/physical health or life of the pregnant woman is considered to be at risk, or if the fetus is deformed and incompatible with life (Samandari et al., 2007). This was an historical event for the country. The Family Health Division of Nepal partnered with National Health Training Center, Logistics Management Division and the National Health Information, Education and Communication Center, Marie Stopes International, Family Planning Association of

Nepal, Forum for Women's Law and Development, Safe Motherhood National Federation, Ipas and others with the goals of 1) formulating and implementing safe abortion policy, 2) empowering health system capacity and 3) providing supplies and information for abortion to the health care providers and the public (Samandari et al., 2007).

According to the report from *The Reproductive Health Journal*, as of December 2011, a total of 1507 Nepalese health- care providers (881 physicians, 371 staff nurses and 255 auxiliary nurse midwives) received training on Comprehensive Abortion Care services (CAC) and 532 CAC sites were authorized to provide safe abortion services (Tamang & Tamang, 2005). CAC services include pregnancy testing, pre-counseling about pregnancy termination, abortion procedure, potential risks, complications, follow up care on abortion and the need for contraceptive devices (Tamang & Tamang, 2005). In addition, there have been several community information campaigns, dialogue groups and advertisements on CAC services through various media in Nepal (Singh & Jha, 2007; Bingham, Drake, Goodyear, Gopinath, Kaufman & Bhattarai, 2011). Recommendations have been made to incorporate pre-service CAC training into curricula of medical, nursing and midwifery schools. A total of 497,804 Nepali women received abortion services through these authorized institutions during January 2004 –June 2011 (Samandari et al., 2007). Several national and international organizations such as the Ministry of Health and Population, World Health Organization, United Nations Development Program, United Nations Population Fund and Family Health International have been exerting pressure on many countries to legalize, facilitate and expand the abortion access worldwide (Smith, 2010). These organizations advocate for a mother's

right to choose induced abortion, but they have not considered the right of the baby in the womb. Most research efforts in the area of reproductive health have been conducted from a pro-choice worldview; for example - reproductive health of the mother, use of contraceptive devices, the level of knowledge on legal abortion, types of abortion, accessibility and acceptability of abortion, and a mother's right to reproductive health. However, no interventional reproductive attitude study has been conducted in Nepal from a pro-life worldview. While some researchers and ethicists conceptualize a pro-life attitude as strictly *anti-abortion*, others conceptualize it more broadly to include *the right to live for all including the elderly, those with disabilities, and protection from euthanasia and health care rationing* (McCrum, 2011). For the purpose of this study, the term pro-life will be conceptually defined strictly as 'anti-abortion'.

Objective

To determine the impact of pro-life education on the abortion attitude among Nepali college students.

Hypothesis

There will be a change in abortion attitudes among Nepali college students after providing pro-life education.

Chapter 2

Review of Literature

Conceptual Framework

This study was developed based on the Cognitive Dissonance Theory (CDT) (Festinger, 957). CDT has been commonly used in the fields of education and psycho-sociology, and has been further studied and validated yielding 1,000 + publications in the last 30 years (Elliot & Devine, 1994). Cognitive dissonance is the state of psychological discomfort that takes place when two or more contradictory cognitions occur simultaneously (Festinger, 1957). According to Festinger, cognition is a comprehensive term defined as the knowledge, belief, attitude, values, feelings, and opinion of oneself, others, or the surroundings. Thus the terms 'dissonance' and 'consonance' refer to the relationship which exists between those cognitions (Festinger, 1957). Simply put, dissonance is inconsistency between two cognitions, whereas, consonance is consistency between two cognitions. For instance, the belief that smoking is injurious to health is consistent with the medical research knowledge; thus maintaining the state of consonance. However, if five research studies were to show smoking was not injurious to health, this inconsistency with prior beliefs would create dissonance in the public.

Every individual's cognition is heavily influenced by the society, culture, education, technology and government policies. When a person is exposed to information and beliefs that are inconsistent with their prior knowledge, they go through the period of cognitive dissonance (Festinger, 1957). This cognitive dissonance brings motivation to reduce the psychological discomfort (Festinger, 1957). Thus, a person experiencing

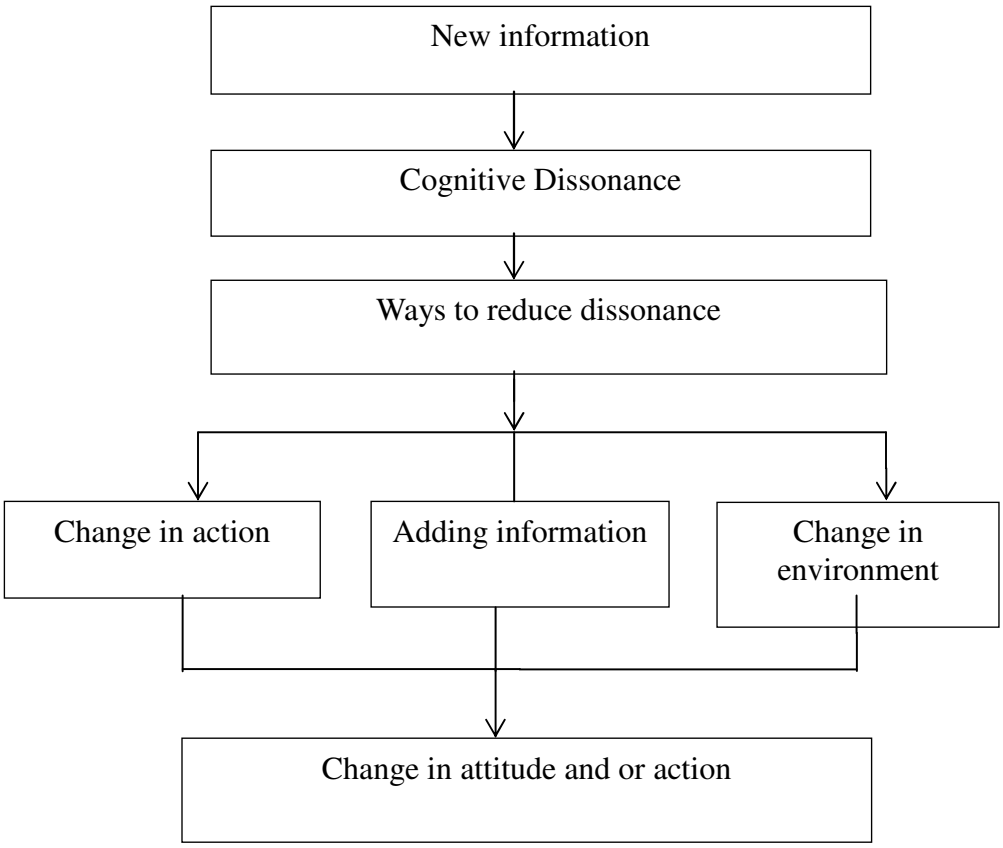
greater dissonance would demonstrate greater attitude change than a person experiencing no cognitive dissonance.

In developing my pro-life education, I was interested in creating cognitive dissonance in order to motivate attitude change. This required that I understand *the knowledge, beliefs, attitudes, values, feelings, and opinions* of the Nepali people. In 2007, Puri, Ingham and Matthews published the results of a qualitative study using face-to-face , structured interviews with non-married individuals and with married couples who resided in five districts of Nepal and had unintended pregnancies (412 women ages 15-24 years and 125 men ages 15-27 years). Among these participants, 27 women and 11 men attempted to abort their unintended pregnancy (Puri, et al., 2007). Reasons for continuing with an unintended pregnancy included 1) the belief that aborting a baby is a sinful act (78.8%), 2) husband opposition to abortion (75.9%), and 3) personal health concerns such as physical weakness, infertility, organ perforation and even death (89.7%). Furthermore a smaller number couples stated that abortion went against the socio-cultural norm and they were fearful of losing their prestige in the society (14.1%) (Puri et al., 2007).

Based on the findings by Puri et al. (2007), I postulated that the pro-life worldview was actually more consonant with Nepali attitudes and beliefs than a pro-abortion worldview. I developed the pro-life education with the purpose of creating cognitive dissonance by showing how abortion is inconsistent with their *knowledge, beliefs, attitudes, values, feelings, and opinions.* For the Napali people the issue of abortion is of great concern and threat, thus this issue had the potential to create a greater magnitude of dissonance which would motivate people to continue with their pro-life

beliefs or change their attitude toward a pro-life viewpoint. According to the CDT, once the dissonance is achieved, it is important to have an action orientation to minimize this psychological dissonance. Festinger (1957) suggested that cognitive dissonance could be reduced by three actions: 1) receive new information, 2) add a new consonant cognitive element that is of more value (than the dissonant value), and 3) provide motivation to reduce the psychological discomfort (Festinger, 1957).

Figure 1. Theoretical model: Cognitive Dissonance Theory



Based on the CDT, the pro-life education included information on growth and development of an unborn baby, sanctity of life and adverse effects of abortion procedures, which brought dissonance in their attitude on this issue. Such dissonance

motivated students to think through their beliefs on the abortion issues and come to the state of consonance. The educational contents on alternatives to abortion, prevention of unintended pregnancy, abstinence, support system in the community for the child and the mother, and proper use of contraceptive devices would minimize the dissonance and encourage choosing pro-life. The CDT theoretical model is provided in Figure 1.

Literature Review

Nepali Culture in Relation to Reproductive Health. Nepal is one of the underdeveloped countries in the world with rich multicultural and multi-ethnic norms and values. Nepal is a secular country with most of the people confessing to be Hindu and Buddhist. Christianity is the growing religion in the country. Nepali people's everyday living is highly influenced by religious beliefs. Controversies exist in whether life begins in the womb or not. One view is that fetal life does not start at conception; life starts during the fifth month of gestation (Kurjak, Carrera, McCullough & Chervenak, 2007). Hinduism has many gods and Hindus believe in reincarnation. The teachings of Hinduism promote children as a blessing from god for the continuation of the family lineage and for support in household affairs. They are to be loved and taught spiritual merit. Therefore, the Hindu religion condemns use of contraception and abortion. Killing human life is a sin, and perpetrators would be sent to hell after death. Therefore, abortion is considered a sinful act by people who have the knowledge that an unborn fetus is a living being (The Heart of Hinduism, 2004). Similarly, Buddhism believes that there is interconnectedness among human beings. Living a peaceful life in the community is encouraged and doing harm or killing of human beings is prohibited (Kurjak et al., 2007). Thus, the teachings of these two prominent religions are consistent with a pro-life view.

While Nepal is conservative in several social issues, it is rapidly marching toward modernization and liberalization. People residing in the rural part of Nepal, especially college-aged students, are migrating to the capital city, Kathmandu (Regmi, Simkhada, & Teijlingen, 2008). Once Nepali women were deprived of attending school, but now they are pursuing higher education; once wives were strictly prohibited in family decision making, but now they are advocating for women's rights; once premarital and extra-marital sex were rare cases, but now these behaviors are increasing in number. Similarly, reproductive health rights and legalization of abortion have given an access to women in making their own reproductive health decisions, including induced abortion (Matrika, 2006 & Regmi et al., 2008). Thus, it is apparent that over the course of 5 to 10 years, the attitudes and behaviors of Nepali people have changed on various social issues, including traditional prohibitions of abortion.

Significance of Problem. The prevalence of induced abortion among young Nepali adults in urban areas is increasing due to a desire for a small family size and birth spacing. In Nepal, a study showed that 36% of women between 25 and 29 years of age seek induced abortion (Thapa & Padhye, 2001). In Nepal, common reasons for seeking induced abortion are multiple pregnancies (61.4%), completed desired family size (61.4%), unwanted pregnancy in marriage (10.52%), unintended pregnancy in unmarried young women (5.26%) and a desire to have a son instead of a daughter (Puri et al., 2007; Dawadi & Shrestha, 2007; Shrivastava, Bajracharya & Thapa, 2010 & Bhattarai, 2011). Male gender preference is another historical social issue. A lot of the Nepali couples are trapped under the family and social expectation to have at least one male child. For this reason, the couples produce more children until they have a son. This has raised another

alarming issue: sex- determined induced abortion in Nepal, which is beyond the scope and purpose of this research (Matrika, 2006). According to Sushma B Rayamajhi (2011), a senior community nurse administrator at the Family Health Division in Nepal, an estimate of 70,000 legal abortions are carried out in Nepal every year (Bhattarai, 2011) During her 32-year career in the health sector serving in all 75 districts of Nepal, she has seen an alarming rise in the abortion rate in Nepal (Bhattarai, 2011).

Abortion Attitude in the World and in Nepal. One reason that many countries have legalized abortion was to reduce the complications of unsafe abortion. Unsafe abortion is the termination of pregnancy induced by the woman herself, a non-medical person or a health worker under unhygienic conditions (WHO, 2007). Before legalization of abortion in Nepal, 54% of all hospital admissions were women with post-abortion complications (Tamang & Tamang, 2005). The hypothesis by all 'safe abortion' advocates that legalization of abortion will result in safe abortion and less complication has not materialized. A post legalization abortion complication descriptive study was conducted in a Maternity Hospital in Kathmandu Nepal in 2004. A total of 305 cases of abortion complications were admitted during the 3-month study period accounting for 39.7% of total gynecological admissions (768). Seventy- seven percent of cases had incomplete abortion including cases of uterine perforation, bowel injury and peritonitis (Ojha, Sharma & Paudel, 2004). In addition to the physical complications, at least 102 studies worldwide demonstrate significant psychological disorders, major depression, and suicide risks among women who abort (Smith, 2010).

A *pro-choice* worldview is one where women are given the right to choose abortion as a *reproductive health right* (Misra, 1998). Various researchers have described

the factors that influence abortion decision-making. Demographic variables such as the age, gender, religion, race, and education are consistent with a pro-life or abortion attitude (Misra, 1998). National Opinion Research Centers (NORC) general social survey used the US national data to measure the role of age, gender and race towards prolife or abortion attitude. A young cohort, age 18-24 years, showed greater approval of pro-abortion attitude than the older age cohort group (Misra, 1998). While, regular church attendance was associated with pro-life attitude, a higher level of education and low annual income was related to pro-choice attitude (Misra, 1998). Another study was conducted among 94 American undergraduate male and female students to survey their attitudes regarding male involvement in the abortion decision-making process. The majority of participants were pro-life; with the ratio of pro-life to pro-choice of 4:1 (Jones, 2006). The participants in this research agreed that there should be higher level of male involvement in abortion decision making (Jones, 2006).

In Nepal, various factors affecting abortion decision-making have been reported. A study among 412 women (aged 15-24 years) and 125 men (aged 15-27 years) in five districts of Nepal who had unintended pregnancies reported various factors that influenced their abortion decision making process (Puri, et al., 2007). People who lived in the rural areas (Male - 12.7%, Female - 6.1%) had a higher incidence of abortion than people from the urban areas (Male -2.2%, Female - 7.2%). In general, people with higher levels of education had significantly greater prevalence of abortion compared to people with no education (15.5%), primary (10.5%), secondary (11.9%), or higher (32.4%) education. Participants from Hinduism responded with higher abortion rates (15.8%) than Buddhism (0.0%). Both poor and rich people were involved in abortion with significant

abortion rates among poor people. Other factors affecting decision-making were ethnicity and exposure to mass media (Puri, et al., 2007). When it comes to abortion decision-making, woman tend to consult with her husband, mother, mother-in-law, family relatives, friends and the abortion care providers. However, various reproductive health advocates have been encouraging and emphasizing the allowance of women to use their reproductive health rights in making their own informed decision. Family planning and abortion services among young couples have been much emphasized recently (Puri et al., 2007).

Relationship between Education and Attitude Change. While it is well documented that education increases *knowledge*, for the purpose of this study, I was interested in changing *attitude* through education. In 2011 (Mahmoodie) a quasi-experimental study was conducted to explore the impact of education on the knowledge and attitude of 90 male teachers about their practice of family planning. The study used pamphlets along with question and answer sessions guided by the health belief model. T-tests comparing family planning awareness and attitude scores before and after training were statistically significant ($P<0.001$) (Mahmoodie, 2011). In 2005 (Strkalj) a study was conducted to examine the effect of education on racial attitudes among Bachelor of Science students (average age 20 years) in South Africa. An introductory module on human variation consisted of eight 45-minute lectures with one three-hour practical class. One hundred and forty-one students (female-88 and male-52, 1 unknown) were surveyed six weeks before the module of human variation and one hundred and thirty five (female-84 and male-51) again six weeks after the class ended. The result demonstrated that even a minimal education session influenced racial attitude of students ($P<0.05$) (Strkalj,

2005).

In the smoking cessation literature, a correlation study was performed to assess whether an experiential learning intervention, based on CDT, would increase college student smokers' intentions to quit smoking (Simmons, Webb & Brandon, 2004). Students were given an assignment to prepare educational videos on the risks of smoking and feasibility of quitting. The result demonstrated that the intention to quit smoking increased and risk-perceptions increased in the intervention group. Thus the study supports the hypothesis that attitudes and intentions to quit smoking can be influenced by a brief educational intervention (Simmons et al., 2004).

In 2007 (Chiou and Wan), the CDT was used to examine the relationship between the role of personal responsibility and online gaming. The pretest-posttest experimental study demonstrated that participants who felt greater personal responsibility for the consequences of online gaming exhibited greater attitude change than those who did not receive the personal responsibility intervention (control group) (Chiou & Wan, 2007). Attitude change across the three experimental groups was significantly greater than that of the control group (x□ 1.13 vs. x□ 0.11, P<0.001). Thus in the context of online gaming, dissonance occurred when their attitudes toward online gaming and awareness of its aversive negative consequences were incongruous (Chiou & Wan, 2007).

Two experiments were conducted to test the hypotheses made by Harmon-Jones & Harmon-Jones (2002) that an action oriented mindset would decrease the cognitive inconsistency in an individual. According to the action-based model, which is based on CDT, the action orientation assists individuals in transforming their decisions into effective and uncomplicated action. One way to engage in an un-conflicted post-decision

action is by increasing the value of the chosen alternatives and/ or decreasing the value to the rejected alternative (Harmon- Jones & Harmon-Jones, 2002).

Pro-life Resources in Nepal

According to Heartbeat International, North America has 2300 Pregnancy Help Ministries to aid 3% of the world-wide abortion problem, but outside of North America, there are only 600 ministries to aid 97% of the problem (Heartbeat International, 2012). Pro-life resources available in the United States are pregnancy centers, counseling, pro-life media, abortion education, adoption resources, pro-life news, and legal pro-life groups. These resources are available in a few international countries such as Mexico, Ecuador, Bolivia, Australia, Denmark, South Africa, Russia, Philippines and India (Heartbeat International, 2012). However, Nepal is not on the list of outreach countries.

Voice of Fetus (VoF) is the only not-for-profit and non-government organization working for pro-life in Nepal since 2010. The mission of this Christian organization, run by Nepali Christian pro-lifers, is "to strengthen the value of human life so that abortion becomes unnecessary and fullness of life is assured to all" (E.S. Rai, personal communication, October, 2012). VoF is involved in pro-life through three integral programs: prevention, intervention and recovery programs. The prevention program consists of awareness campaign, seminars, and open forum programs developing visual and printing materials and mass media. The intervention program supports pregnant women and babies through mother care home, childcare centers, adoption link program, LIFE pro-life package program, and crisis pregnancy centers. The recovery program provides post-abortion counseling and pregnancy resources (E.S. Rai, personal communication, October, 2012). The VoF purposes to conduct vision-building seminars

in five developmental regions of Nepal. VoF has been training pastors and church leaders on pro-life education. As of 2012, a total of 4916 Nepali people got training on pro-life (VoF Monthly, 32, 1.). This manpower is not enough to reach out to the population of 29 million in Nepal.

Summary

Abortion is a global ethical issue that needs much consideration and effort. Various studies show the positive effect of education on attitude change. Several studies have been done in the education and psychosocial arenas using the CDT developed by Leon Festinger in 1957, to show the link between educational interventions and change in attitudes (Chiou & Wan, 2007 & Simmons et al., 2004). Although CDT has not been used in pro-life education, this theory is relevant to the purpose of this study. CDT postulates that people will try to change their prior attitude to eliminate dissonance, if they learn the aversive consequences of their action (Festinger, 1957). During this research intervention, the first phase of the education on pro-life brought dissonance among the students. The second phase of education was aimed at minimizing the dissonance by supporting the existing Nepalese personal and social beliefs on the value of life and adding positive information on prolife and the alternatives to abortion, thus assisting Nepali college students in making an informed decision. Furthermore, Nepal is primarily a male-dominant country. When it comes to deciding on contraceptive methods, number, and gender of children; husbands have a greater decision making authority than the wives (Bhattaria, 2011). Thus, it is vital for both male and female students to be a part of pro-life education so that they can make an informed decision about their reproductive health and family.

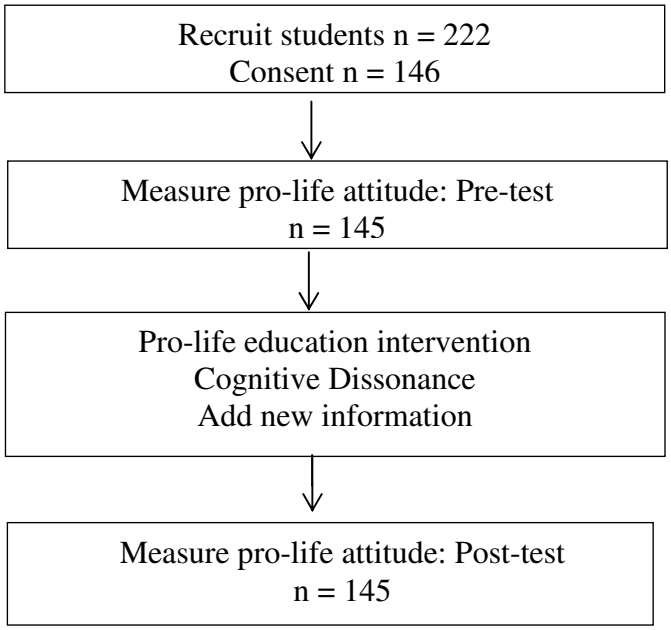
Chapter 3

Method

Research design

A one group pretest posttest design was used to determine the impact of pro-life education on abortion attitudes among Nepali college students in Kathmandu, Nepal. The study design is provided below (Burns & Grove, 2009).

Figure 2. Study framework and procedure for data collection based on the CDT



Ethical consideration

This research study received Cedarville University Institutional Research Board (IRB) approval in November, 2012.

Subjects and Sample

A hundred and forty five Nepali college students aged 18 and above who were pursuing bachelor or master degrees in health science or business management in Kathmandu, Nepal participated in the study. A power analysis (effect size = 0.5, alpha =

0.05) indicated a power of 0.86. The inclusion criteria were (1) male and female college students, (2) ages of 18-years-old and above, (3) understand written and spoken English, (4) able to communicate in written and spoken English and (5) willing to remain in the class during pretest, education intervention and posttest sessions. The students in Nepal are taught in British English from their primary school level and throughout the college. Therefore, the college students typically are able to understand written and spoken English. They can speak and write in English. Thus, my education session and the teaching materials were in English language.

Measurement of variables

The study consisted of two study variables; pro-life education was an independent variable and abortion attitude was a dependent variable Abortion attitudes were measured using a 22-item Likert pro-life attitude scale. Using this scale, the more "pro-life attitude" the participant had, the higher the score; conversely, the more "pro-abortion" attitude that a participant had the lower the score. As such, for the purpose of calculating a summed score, all items that expressed a "pro-life" view (e.g. I believe that abortion at any stage of the pregnancy is killing the baby) were scored as written on the scale; while all items that expressed a "pro-abortion" view (e.g. I believe that every woman should have the right to have an abortion if she chooses) were reverse scored.

Instrumentation

The author designed the pro-life attitude scale. A pro-life expert panel of 8 members consisting of pro-life experts from the nursing, bioethics, pregnancy crisis centers and VoF evaluated the validity of this new tool on the basis of comprehension, clarity and appropriateness. The tool was revised upon receiving feedback. Test-retest

reliability was established using 15 Nepali students. The Cronbach alpha was 0.82 (see appendix A &B for pro-life attitude survey)

Education Intervention

The following outlines the educational content of the study:

1. Abortion around the world and Nepal (WHO, 2007; Sedgh, Henshaw, Singh, Ahman, & Shah, 2007; Samandari et al., 2007)
2. Definition of abortion, pro-life and pro-choice (WHO, 2007)
3. Contributing factors to abortion in Nepal
4. Sexual purity- abstinence
5. Education on growth and development of a baby from conception to birth using Video http://www.youtube.com/watch?v=O2l1-kvKomg (Wiebe & Adams, 2009), and distribution of brochures First 9 months (Dihle & Bradley, 2010) and Before you Decide (Care Net, 2011).
6. Education on abortion, types of abortion and its complications (physical, mental, emotional, and spiritual).
7. Social and cultural aspect of abortion: View of abortion regardless of religious beliefs (Kurjak et al., 2007 & Stephens, Jordens, Kerridge & Ankeny 2010).
8. Education on alternatives to abortion.
9. Community resource- VoF.
10. Life testimony video on abortion and healing: http://www.youtube.com/watch?v=7Ol4Ljr38ds&feature=related

Procedure

The directors of three different colleges in Kathmandu, Nepal were contacted via email, phone conversation and personal campus visits to secure approvals for conducting the study. Letters of approval to perform the research study were received from the college directors (see appendix F for letters of permission from colleges in Nepal). An onsite information session about the research, confidentiality agreement, pre-test, education intervention and post-test was conducted with the students. A total of 222 students were surveyed; Morgan International College (n=32), Nobel College (n=65) and Om Health Campus (n=72). A total of 146 students from these colleges consented and 145 students participated in the study (see appendix G for a copy of the consent form) ; Morgan International College (n=32), Nobel College (n=55) and Om Health Campus (n=58). Sixty five students from Noble College refused to participate due to their busy schedule. Twelve students at Om Health Campus were present for the learning purpose but did not participate in the study. Only one student dropped out in the beginning of the study due to time conflict, making the total of 145 participants.

The researcher conducted all the sessions including recruitment, pretest, education session and posttest. The pro-life attitude survey was administered before and after the intervention. The education intervention took place in a conference hall which could accommodate about 50 people at a time. Before the intervention, students completed the demographic information sheet and the 22-item pro-life attitude questionnaire within 20 minutes. Students were informed that the emotional stress due to the sensitive nature of the education provided might occur and they had the freedom to withdraw from the study at any time. Following the pretest, the education intervention was completed, followed

by the second administration of the 22-item pro-life attitude survey. Students completed the post-test within 15 minutes. The total intervention session lasted for an hour and fifteen minutes. All the pre-test and post-test surveys were secured in a confidential brown bag until it could be placed in the locked cabinet.

During pretesting I began to realize that the contents and concepts of the attitude scale were new to the students. Therefore, both English and the nation's language Nepali were used during the education session in all three colleges for better understanding of the contents. As an assurance, frequent evaluation of student's understanding on teaching information was performed during the intervention.

The executive director of VoF was present on all education intervention days from start to finish in order to provide information about VoF to the participants. VoF was recognized as the community resource, and participants were encouraged to contact VoF for further information in the future. At the end of the posttest, a voluntary debriefing and counseling session was made available to the students regarding the subject matter. A total of 5 students participated in debriefing sessions with general questions about location, activities and the possibilities for voluntary job in VoF. None of the participants showed emotional break down or needing personal counseling. All 145 participants remained seated for the whole session without interruption. For the follow up and further questions, the contact information of the researcher (*email)* and VoF (*email and contact number)* were provided. Onsite follow up by the researcher on those students was not performed due to the time frame and the type of the study. However, VoF agreed on the great need and the possibility for follow up visits and teachings with those students (VOF, personal communication 3/18/2013)

Data Analysis

Data were analyzed using the Statistical Package for Social Science (SPSS) software. A p-value of 0.05 was determined a priori as statistically significant. Descriptive statistics, including frequencies, percentages, means and standard deviations, were used to describe the demographic information. Paired t tests were conducted to determine if there was a statistical difference between the pre-test and post test scores on the prolife attitude scale. Phi correlations were used to analyze the relationships among the demographic and attitude variables. There were a total of 27 missing data; 3 demographic characteristics and 24 attitude characteristics. The missing data were handled by giving the numerical value zero during data entry.

Chapter 4

Results

Demographic Characteristics

Demographic characteristics are presented in Tables 1.1 and 1.2. Out of 145 students, most were between of 18-25 years of age (98.6%), female (82.8%), single (94.5%), and childless (98.6%). While some students' primary residence was in Kathmandu, as is common, many of them migrated to the capital city for education purposes. Eighty three participants (57.2%) had been residing in Kathmandu for ≥ 5 years and sixty-one (42.1%) participants had been living in the city for < 5 years. The participants were majoring in health science such as nursing and public health (59.3%) or business management (40.7%). The level of education of the participants were proficiency certificate level nursing/associate (35.2%), bachelor 1st year (59.3%), bachelor 2nd year (4.8%), bachelor 3rd year (0.7%). Regarding religious beliefs, most of the students professed to be Hindus (84.1%); while others believed in Buddhism (13.1%) and Christianity (2.8%). In regards to male or female child preference the vast majority (89.7%) reported no preference. Only a few students had received teaching on abortion (18.6%) and/or pro-life (3.4%) in the past. Three (2.1%) students had previous unwanted pregnancy and one (0.7%) had an abortion procedure performed in the past. One hundred and twenty students (82.8%) reported that they have heard of or knew someone who had an abortion.

Table 1:1 Demographic variables of the college students

Variables	Frequency (n= 145)	Percentage (100%)
Age (years)		
18-25	143	98.6
>= 26	2	1.4
Missing data	0	
Gender		
Male	25	17.2
Female	120	82.8
Missing data	0	
Marital status		
Single	137	94.5
Married	7	4.8
Widowed	0	0
Missing data	1	.7
Number of children		
1 child	2	1.4
No children	143	98.6
Missing data	0	0
Length of residence in Kathmandu		
< 5 years	61	42.1
>= 5 years	83	57.2
Missing Data	1	.7
Religion		
Hinduism	122	84.1
Buddhism	19	13.1
Christianity	4	2.8
Others	0	0
Missing data	0	0
Education		
PCL associate	51	35.2
Bachelor 1st year	86	59.3
Bachelor 2nd year	7	4.8
Bachelor 3rd year	1	.7
Missing data	0	0
Major		
Health Science	86	59.3
Management	59	40.7
Missing data	0	0

Table 1.2. Demographic variables of the students

Variables	Frequency (n= 145)	Percentage (100%)
Preference of having male or female child		
Male	4	2.8
Female	9	6.2
Does not matter	130	89.7
Missing data	2	1.4
Previous teaching on abortion received		
Yes	27	18.6
No	113	77.9
Missing data	5	3.4
Previous teaching on pro-life received		
Yes	5	3.4
No	135	93.1
Missing data	5	3.4
Previous unwanted pregnancy		
Yes	3	2.1
No	141	97.2
Missing data	3	2.1
Previous abortion		
Yes	1	.7
No	140	96.6
Missing data	4	2.8
Heard of or know someone who had abortion		
Yes	120	82.8
No	20	13.8
Missing data	5	3.4

Abortion Attitude

The results of a paired t test showed that there was a significant (t= -14.63, df= 144, p=0.000, α=0.05) shift toward a pro-life attitude from the pre-test score (x=2.91, SD ±.27) to the post-test score (x= 3.22, SD± .24) (Table 2). Furthermore, the itemized pair t-test analysis demonstrated that there was a statistically significant difference in 18 out of 22 items: 1- 9, 11-17 and 20-21 (p=0.000, α = 0.05). These survey items demonstrated attitude change from disagree to agree or agree to strongly agree towards pro-life beliefs (refer to Table 3)

Table 2: Paired samples t-test

t-test	Mean (X)*	SD (±)	t	p = 0.000 (α ≤0.05)
Pretest	2.91	.27		
Post test	3.22	.24	-14.63	0.000
Pretest mean-posttest mean	-.31	.26		

*N=145

Table 3. Itemized pre-test and post-test attitude

Items	Pre-test X ± SD	Post-test X ± SD	Difference mean	p value
1. I believe human life begins at conception.	3.46 ± .67	3.90 ± .32	.45	0.000
2. I believe life begins at birth	2.81 ± .97	2.18 ± 1.02	-.63	0.000
3.All human life including the life of unborn children is valuable	3.49 ± .64	3.70 ± .50	-.21	0.000
4.All human life including the life of unborn children should be preserved	3.42 ± .68	3.75 ± .45	.33	0.000

Items	Pre-test X ± SD	Post-test X ± SD	Difference value	P value
5. Every unborn baby should have an equal right to live as any other person	3.52 ± .64	3.73± .48	.21	0.000
6. I believe abortion is an intentional termination of a human life (rather than termination of pregnancy).	2.66±1.00	3.13 ± .88	-.48	0.000
7. I believe that abortion at any stage of the pregnancy is killing the baby.	3.20 ± .89	3.46 ± .80	.26	0.003
8. I believe that every woman should have the right to have an abortion if she chooses.	1.84 ± .71	2.14 ± .76	.30	0.000
9. I believe abortion can be used as a means of birth control.	2.85 ± .88	3.27 ± .86	.42	0.000
10. If the law says abortion is legal, it also means it is morally and ethically right.	2.78 ± .81	3.24 ± 3.33	.28	0.108
11. Mrs. Smith has 5 grown up children. She is 12 weeks pregnant. She wants to abort the child because her family cannot afford to have another baby. For given reasons, she should be allowed to abort the child.	2.09 ± .76	2.76 ± .80	.21	0.000
12. Mrs. Smith found out that her baby in the womb has a genetic disorder. In this case it is reasonable to let the baby go through abortion (compassionate abortion).	2.08 ± .77	3.00 ± .89	.92	0.000
13. I believe that it is unfair for an unmarried woman to have to face the embarrassment of pregnancy as a result of sex before marriage or rape	1.68 ± .76	1.97 ± .81	.30	0.000

Items	Pre-test X ± SD	Post-test X ± SD	Difference Value	P value
14. I believe that after an abortion, a woman can have physical complications including death	3.05 ± .68	3.49 ± .61	.44	0.000
15. I believe that after an abortion, a woman can have emotional, mental and spiritual difficulties.	3.20 ± .65	3.69 ± .48	.49	0.000
16. I believe that parenting and adoption are alternatives to abortion.	2.94 ± .75	3.57 ± .63	.62	0.000
17. I believe that the gender of the baby is determined only by the father.	2.02 ±1.17	2.17 ± 1.18	.14	0.000
18. I believe that the partners (husband and wife or girlfriend and boyfriend) have mutual responsibility on making decisions on prolife or abortion.	3.48 ± .74	3.57 ± .67	.10	.166
19. I believe that the current practice of gender selective abortion favoring baby boy is wrong.	3.70 ± .62	3.61 ± .83	-.08	.279
20. I believe that my religious book values the life of an unborn baby.	2.92 ± .81	3.39 ± .70	.47	.000
21. I believe pro-life is the right to life of an unborn baby.	3.15 ± .68	3.64 ± .48	.49	.000
22. I believe there is a great need of prolife education among Nepali students.	3.75 ± .43	3.78 ± .42	.28	.518

In an effort to determine any confounding variables, the Phi value correlation between demographic variables and the attitude change score was analyzed. Two positive correlations were revealed: *previous pro-life education and attitude change* (p= .001, α= 0.05) and *heard of or know someone who had abortion and attitude change* (p= .04, α= 0.05). There were no other significant correlations between any demographic variable and the attitude change score.

Table 4. Correlation Phi among the demographic and attitude variables

Variables	Phi Value	P
Age	.34	1.00
Gender	.43	.97
Marital status	.91	.006
Number of Children	.46	.90
Length of residence in Kathmandu	.63	1.00
Religion	.72	.75
Major	.54	.45
Education	1.12	.001
Preference of having male or female child	1.13	.001
Previous teaching on abortion received	.73	.67
Previous teaching on pro-life received	.75	.55
Previous unwanted pregnancy	.85	.58
Previous abortion	.86	.04
Heard of or know someone who had abortion	.86	.04

Chapter 5

Discussion

Supporting original hypothesis. This study rejects the null hypothesis and supports the original hypothesis that pro-life education brings change in abortion attitudes (t= -14.63, p=0.000 α =0.05). The pro-life attitude of participants before education ranged from *disagree* to *agree* (x□= -2.91, SD ± .27) and after education it ranged from *agree* to *strongly agree* (x□= 3.22, SD ±.24). There were significant differences (α = 0.05) in 18 out of 22 attitude items after the education intervention showing that **pro-life education did increase pro-life attitude in Nepali college students**. The post-test attitude in favor of pro-life ranged from *agree* to *strongly agree* and attitude against abortion ranged from *agree* to *disagree* after education. For instance, listed below are five survey items where student attitudes significantly changed **toward a pro-life view**.

Item 1- I believe human life begins at conception

Item 2- I believe life begins at birth.

Item 6- I believe abortion is an intentional termination of a human life (rather than termination of pregnancy.

Item 15- I believe that after an abortion, a woman can have emotional, mental and spiritual difficulties."

Item 16- I believe that parenting and adoption are alternatives to abortion.

An extensive search on previous research studies related to the impact of pro-life education and abortion attitude was done using databases such as Academic Search Complete, Atl Healthwatch, Christian Periodical Index, CINAHL, Cochrane Central Register of Controlled Trials, Cochrane Database of Systemic Reviews, Legal collection,

and MEDLINE. No previous study on pro-life and abortion attitude in Nepal or worldwide was retrieved, which signifies the importance of future studies on this topic.

There have been several pro-life movements and awareness programs throughout the world, and pro-life organizations continue to provide pro-life education to their clients. Although no study has been conducted to determine the impact and effectiveness of pro-life education on abortion attitude, the results of this study were consistent with the studies that demonstrated education brings attitude change (Chiou & Wan, 2007; Mahmoodie, 2011; Simmons et al., 2004; Strkalj, 2005). In this study, *pro-life education* and those who *had heard of or know someone who had abortion* showed a positive correlation with pro-life attitude.

Unlike the study by Misra (1998) that showed a positive relationship between demographic variables (e.g. age, gender, religion, marital status, length of stay in city or urban area) and the pro-life or abortion attitude; this study did not show the relationship among these variables. Also, this study did not show child gender preference which was inconsistent with the previous studies among Nepali people by Misra (1998).

Link to the conceptual framework. During the first half of the education intervention, participants were introduced to both pro-life and abortion issues. This created cognitive dissonance among participants. The second half of the intervention aimed at minimizing the dissonance through adding new information. This information included 1) clarification on when life begins; 2) a video on the first 9 months of a baby in the womb, 3) types of abortion and complications of abortion; 4) supporting the existing Nepalese personal and social beliefs on the value of life; and 5) adding positive information on pro-life and the alternatives to abortion. Thus as postulated by CDT

(Festinger, 1957), the education presentation brought cognitive dissonance and the new information provided resulted in changes from abortion attitude to pro-life attitude as demonstrated by statistically significant difference between the pre-test mean score and the post-test mean score.

Limitations and strengths. Several limitations were identified in this study. Internal validity may have been compromised by a testing effect (only one hour between the pretest and the posttest). In addition, while there was a significant attitude change immediately after the intervention, no further testing was conducted and long-term attitude change cannot be determined by this study. Furthermore, external validity is limited by generalizability. This study was focused among Nepali college students studying in Kathmandu valley. Therefore, the findings of this study can be generalized among the Nepali college students in Kathmandu, Nepal, not individuals outside of Nepal-and certainly not worldwide. Finally, this study was designed to measure attitude change after education; this study did not measure behavior change.

Strengths of this study include 1) the first interventional study on pro-life in Nepal; 2) large effect size; 3) a new abortion attitude scale was designed which showed excellent internal consistency; 4) primary investigator was a native of Nepal and was able to provide culturally appropriate education; 5) collaborated with the local pro-life organization (VoF) and incorporated in the study as a local community resource for the students; and 6) theoretically driven research by using both the CDT. Finally, this is an example of Biblical integration in nursing research.

Implications for practice. CDT has a great potential to be used in the nursing field for the purpose of bringing about attitude change. In the health care field, new research is

being reported along with changes to practice and the development of evidence based practice guidelines. It can be challenging to bring changes in the attitude and practice (behavior) of nurses and doctors when their current practice is different than new practice guidelines. Having the knowledge of cognitive behavior theory can provide guidance to those change agents on ways to promote change in attitudes and behaviors. Furthermore, this study provides encouragement to pro-life organizations to continue educating to those experiencing unplanned pregnancies, families, and communities. Also, as a primary care provider, advance practice nurses can play a vital role in educating clients on pro-life and abortion issues as appropriate as a part of comprehensive nursing care. The vital part of pro-life education is a *complete information about both pro-life and abortion* so that women, men, and families can make their own informed decision based on quality information. Hopefully, by providing complete information the number of abortions will decrease.

Recommendation for further research. First, future pro-life research should involve diverse population groups for greater generalizability. Second, a longitudinal study that would measure attitude change and behavior is recommended. Third, a concept analysis on term *pro-life* should be conducted to clarify and define this widely used term. While the term *pro-life* frequently indicates the right to live irrespective of age or circumstances, this study used the term with the more narrow meaning of *anti-abortion*. Most of the participants of this study were unaware of the term *pro-life* in this context, but they were able to relate to the term *anti-abortion*. Finally, further testing of the Pro-Life Attitude Scale that was developed for this study will provide greater reliability and validity of this instrument.

Summary

Induced abortion is a worldwide reproductive health issue that includes the country of Nepal and needs much attention. The purpose of this research was to determine the impact of pro-life education on abortion attitude among Nepali college students. During a time of heavy influence from various national and international organizations pressuring to legalize, facilitate, promote and expand abortion access in Nepal; this research study presented comprehensive education on pro-life and abortion to Nepali college students so that they can make their own informed reproductive health decision. Using the 'adding information' component of cognitive dissonance theory, this study revealed that pro-life education does result in a more pro-life attitude among the participants.

Various pro-life organizations in the United States and around the world have been providing pro-life education to the clients. However, there has not been a research study conducted showing the impact of pro-life education on abortion attitude change. This study and its findings not only answer this question but also lays the groundwork for an important ethical and moral issue in Nepal. The resounding result of this study motivates pro-life organizations to continue educating clients, and encourages health care providers to integrate health education as a part of comprehensive care. Further research in these issues would assist in generalizability of the study. This study is an example of Biblical integration in nursing research.

References

Alcorn, R. (2000). *Prolife answers to prochoice arguments*. Oregon: Multnomah publishers.

Bingham, A., Drake, J. K., Goodyear, L., Gopinath, C. Y., Kaufman, A., & Bhattarai, S. (2011). The role of interpersonal communication in preventing unsafe abortion in communities: The dialogues for life project in Nepal. *Journal of Health Communication, 16*(3), 245- 263.

Bhattaria, S. (2011, 1 24). Sex-selective abortion on the rise in Nepal. *Globalpress Institute*. Retrieved from http://www.globalpressinstitute.org/global-news/asia/nepal/sex-selective-abortion-rise-nepaldoi:10.1080/10810730.2010.529495

Burns, N., & Grove, S. K. (2009). L. Henderson & R. Robertson (Eds.), *The practice of nursing research: Appraisal, synthesis, & generation of evidence* St. Louise, Missouri: Saunders Elsevier.

Care Net. (2011). Before you decide

Chiou, W., & Wan, C. (2007). Using cognitive dissonance to induce adolescents' escaping from the claw of online gaming: The roles of personal responsibility and justification of cost. *Cyberpsychology & Behavior: The Impact of the Internet, Multimedia and Virtual Reality on Behavior and Society, 10*(5), 663-670.

Dihle, V., & Beck, B. (2010). The first 9 months, Focus on the family.

Duwadi, N., & Shrestha, P. S. (2007). Safe abortion services in Nepal: Some insights. *Nepal Medical College Journal: NMCJ, 9*(1), 27-31.

Elliot, A. J., & Devine, P. G. (1994). On the motivational nature of cognitive dissonance. *Journal of Personality and Social Psychology, 67*(3), 382-394. doi:10.1037/0022-3514.67.3.382

Festinger, L. (1957). *A theory of cognitive dissonance*. (p. 291). Stanford, California: Stanford University press.

Gordon, M.C., Rachel E.N & Rebecca E. (2007). Recent developments in health law. *Journal of Law, Medicine & Ethics, 35*(4), 751-759. doi:10.1111/j.1748-720X.2007.00199.x

Harmon-Jones, E., & Harmon-Jones, C. (2002). Testing the action-based model of cognitive dissonance: The effect of action orientation on postdecisional attitudes. *Personality and social psychology, 711-723.* doi: 10.1177/0146167202289001

Heartbeat International. (2012). [Web log message]. Retrieved from http://www.heartbeatinternational.org/

Jones, Raymond Kyle. “Male involvement in the abortion decision and college students' attitudes on the subject.” *Social Science Journal*, v. 43 issue 4, 2006, p. 689-694.

Kurjak, A., Carrera, J. M., McCullough, L. B., & Chervenak, F. A. (2007). Scientific and religious controversies about the beginning of human life: The relevance of the ethical concept of the fetus as a patient. *Journal of Perinatal Medicine, 35*(5), 376-383.

Mahmoodie, A. “The impact of education on the knowledge and attitude of male teachers about their practice of family planning: application of health belief model. (English).” *Journal of Jahrom University of Medical Sciences*, v. 9 issue 3, 2011, p. receding-53.

Matrika, M. (2006). Conjugal power relations and couples' parity. *Gender, technology and development*, *10*(2), 159-189. doi: 10.1177/097185240601000201

McCrum, M. (2011). "I am so hopeful": Pro-life education, making a difference today. *National Right to Life News, 38*(8), 19-19.

McGuire, K. (2012, March 14). Interview by MS Shrestha [Personal Interview]. Pro-life education and attitude change on abortion. , Xenia, OH.

Misra, R. (1998). Effect of age, gender and race on abortion attitude. *International Journal of Sociology and Social Policy, 18*(9-10), 94-118. doi: 10.1108/01443339810788533

Ojha, N., Sharma, S., & Paudel, J. (2004). Post legalization challenge: Minimizing complications of abortion. *Kathmandu University Medical Journal (KUMJ), 2*(2), 131-136.

Pesta, A. “War of the Wombs.” *Newsweek*, v. 160 issue 1/2, 2012, p. 20-21.

Pi-Yueh Cheng, & Ping-Kun Hsu. (2012). Cognitive dissonance theory and the certification examination: The role of responsibility. *Social Behavior & Personality: An International Journal, 40*(7), 1103-1111.

Pregnant Pause. (2009). [Web log message]. Retrieved from http://www.pregnantpause.org/people/wholist.jsp?name=life

Pro-life unity. (2012). [Web log message]. Retrieved from http://www.prolifeunity.com/

Puri, M., Ingham, R., & Matthews, Z. (2007). Factors affecting abortion decisions among young couples in Nepal. *Journal of Adolescent Health, 40*(6), 535-542.

Regmi , R., Simkhada, S., & Teijlingen, V. (2008). Sexual and reproductive health status among young peoples in Nepal: opportunities and barriers for sexual health education and services utilization. *Kathmandu University Medical Journal*, *6*(22), 1-5

Rossi, M. (2012). Nonreligious and pro-life. *The Humanist*, *72*(5), 32-35

Samandari, G., Wolf, M., Basnett, I., Hyman, A., Andersen, K., (2007). Implementation of legal abortion in Nepal: a model for rapid scale-up of high-quality care. *Reproductive Health* , doi: doi:10.1186/1742-4755-9-7

Sanger, C. (2008). Seeing and believing: Mandatory ultrasound and the path to a protected choice. *UCLA Law Review, 56*(2), 351-408.

Sedgh, G., Henshaw, S., Singh, S., Ahman, E., & Shah, I. (2007). Induced abortion: Estimated rates and trends worldwide from 1995 to 2008. *The Lancet*, *370*(9595), 1338-1345. doi: 10.1016/s0140-6736(07)61575-X

Seman, Sarah Jean. "Susan B. Anthony List." *Human Events*, v. 68 issue 30, 2012, p. 24-24.

Sheppard, Kate. "Wham, bam, Sonogram!." *Mother Jones*, v. 37 issue 5, 2012, p. 5-7

Sheriar, N., Jaydeep, T., & Ganatra, B. (2007). An exploratory study of complications from comprehensive abortion care (CAC): Improvement of the quality of CAC services in Nepal. *Journal of obstetrics and Gynecology India*, *57*(2), 162-166. Retrieved from http://www.mariestopes.org/documents/IPAS-CAC-summary.pdf

Shrivastava, V., Bajracharya, L., & Thapa, S. (2010). Surgical abortion in second trimester: Initial experiences in Nepal. *Kathmandu University Medical Journal (KUMJ), 8*(30), 169-172.

Simmons, V. N., Webb, M. S., & Brandon, T. H. (2004). College-student smoking: An initial test of an experiential dissonance-enhancing intervention. *Addictive Behaviors, 29*(6), 1129-1136. doi:10.1016/j.addbeh.2004.03.005

Singh, M., & Jha, R. (2007). Abortion legalized: Challenges ahead. *Kathmandu University Medical Journal (KUMJ), 5*(1), 95-97.

Smith, C. United Nations , Focus on the family. (2010). *Government leaders on abortion*. Retrieved from Priests for life website: http://www.priestsforlife.org/government/10-02-chris-smith-fotf.htm

Stephens, M., Jordens, C., Kerridge, I., & Ankeny, R. (2010). Religious perspectives on abortion and a secular response. *Journal of Religion & Health, 49*(4), 513-535. doi:10.1007/s10943-

Strkalj, G., Gibbon, G., & Wilkinson, T. (2007). Teaching human variation: Can education change students' attitude towards race?

Tamang, A., & Tamang, J. (2005). Availability and acceptability of medical abortion in Nepal: Health care providers' perspectives. *Reproductive Health Matters, 13*(26), 110-119. doi:10.1016/S0968-8080(05)26194-3

Thapa, S., & Padhye, S. M. (2001). Induced abortion in urban Nepal. *International Family* The heart of Hinduism. (2004). [Web log message]. Retrieved from http://hinduism.iskcon.org/lifestyle/905.htm*Planning Perspectives, 27*(3), 144.

Tuladhar, H., & Risal, A. (2010). Level of awareness about legalization of abortion in Nepal: A study at Nepal medical college teaching hospital. *Nepal Medical College Journal: NMCJ, 12*(2), 76-80.

Turner, K. L., Hyman, A. G., & Gabriel, M. C. (2008). Clarifying values and transforming attitudes to improve access to second trimester abortion. *Reproductive Health Matters, 16*(31), 108-116. doi:10.1016/S0968-8080(08)31389-5

Vekemans, M. (2009). Making induced abortion safe and legal, worldwide. *European Journal of Contraception & Reproductive Health Care, 14*(3), 165-168. doi:10.1080/13625180902886371

Voice of Fetus. (2012). Voice of annual progress report. *Voice of fetus, Nepal*, *32*

Wan, C. S., & Chiou, W. B. (2010). Inducing attitude change toward online gaming among adolescent players based on dissonance theory: The role of threats and justification of effort. *Computers & Education, 54*(1), 162-168. doi:10.1016/j.compedu.2009.07.016

Wiebe, E. R., & Adams, L. (2009). Women's perceptions about seeing the ultrasound picture before an abortion. *European Journal of Contraception & Reproductive Health Care, 14*(2), 97-102. doi:10.1080/13625180902745130

World Health Organization (WHO), Department of reproductive health and research. (2007).*Unsafe abortion: Global and regional estimates of the incidence of unsafe abortion and associated mortality in 2003- 5th edition.* doi:10.1186/1742-4755-9-7

APPENDICES

Appendix A

Abortion Attitude Scale Validity Evaluation

Dear Pro-life Expert Panel,
As a part of my capstone experience in the Master of Science in Nursing program, school of nursing, Cedarville University, I am working on my thesis titled "The impact of pro-life education on attitude toward abortion in Nepal". I would like to thank you for your willingness to review the measuring tool that will be used to measure the participant's attitude toward pro-life and abortion. After reviewing your comments, I have made some changes in the tool. Please review the revised measuring tool- *Pro-life Attitude Scale* and provide your feedback via email by October 24th, 2012. Your assistance is greatly appreciated.

Purpose of the research: To explore the impact of prolife education on attitude toward abortion in Nepal.

Research population: Nepali college students aged 18-year-old or older who are currently enrolled in the undergraduate or graduate level in Nepal.

Description of the measuring tool: The author of this study developed the pro-life attitude scale based on the book "*Pro-life answers to prochoice arguments*" (Alcorn, 2000) and the literatures on pro-life and abortion. This paper-and-pencil measuring scale includes 20 items related to the attitude toward pro-life and abortion. Each question is rated on a four-point likert scale: strongly disagree= 1, disagree= 2, agree= 3 and strongly agree= 4.

Instruction on critiquing pro-life attitude tool:
Please critique the pro-life attitude tool on the following criteria:

Appropriateness: The contents are appropriate to the topic, purpose and the population
Comprehensive: The contents represent the essential elements to measure the prolife attitude
Clarity: The language used is clear and precise to understand.

Please critique as:
1= The content should be deleted
2= The content should be kept but requires major revision
3= The content should be kept but needs minor revision
4= No revision necessary.

Abortion attitude validity scale evaluation

Items	Comprehensiveness	Clarity	Appropriateness	Comments
1. I believe that human life begins at conception. (Conception is the moment when the female egg is fertilized by the male sperm forming a zygote.)				
2. I believe human life begins at birth.				
3. I believe that all human life, including the life of unborn children is valuable.				
4. I believe that all human life, including the life of unborn children should be preserved.				
5. I believe every unborn baby should have an equal right to live as any other person.				
6. I believe abortion is an intentional termination of a human life (rather than termination of pregnancy).				
7. I believe that abortion at any stage of the pregnancy is killing the baby.				
8. I believe that every woman should have the right to have an abortion if she chooses.				
9. I believe abortion can be used as a means of birth control.				
10. If the law says abortion is legal, it also means it is morally and ethically right.				
11. Mrs. Smith has 5 grown up children. She is 12 weeks pregnant. She wants to abort the child because her family cannot afford to have another baby. For given reasons, she should be allowed to abort the child.				

Abortion attitude validity scale evaluation

Items	Comprehensiveness	Clarity	Appropriateness	Comments
12. Mrs. Smith found out that her baby in the womb has a genetic disorder. In this case it is reasonable to let the baby go through abortion (compassionate abortion).				
13. I believe that it is unfair for an unmarried woman to have to face the embarrassment of pregnancy as a result of sex before marriage or rape.				
14. I believe that after an abortion, a woman can have physical complications including death.				
15. I believe that after an abortion, a woman can have emotional, mental and spiritual difficulties.				
16. I believe that parenting and adoption are alternatives to abortion.				
17. I believe that the gender of the baby is determined only by the father.				
18. I believe that the partners (husband and wife or girlfriend and boyfriend) have mutual responsibility on making decisions on prolife or abortion.				
19. I believe that the current practice of gender selective abortion favoring baby boy is wrong.				
20. I believe that my religious book values the life of an unborn baby.				
21. I believe pro-life is the right to life of an unborn baby.				
22. I believe there is a great need of prolife education among Nepali students.				

Appendix B

Abortion Attitude Survey: evaluating test-retest reliability

Thank you for your participation in this study. The purpose of this study is to explore the impact of pro-life education on attitude towards abortion in Nepal. Please provide your best answer to the following items.

Items	**Strongly disagree (1)**	**Disagree (2)**	**Agree (3)**	**Strongly Agree(4)**
1. I believe that human life begins at conception. (Conception is the moment when the female egg is fertilized by the male sperm forming a zygote.)				
2. I believe human life begins at birth.				
3. I believe that all human life, including the life of unborn children is valuable.				
4. I believe that all human life, including the life of unborn children should be preserved.				
5. I believe every unborn baby should have an equal right to live as any other person.				
6. I believe abortion is an intentional termination of a human life (rather than termination of pregnancy).				
7. I believe that abortion at any stage of the pregnancy is killing the baby.				
8. I believe that every woman should have the right to have an abortion if she chooses.				
9. I believe abortion can be used as a means of birth control.				
10. If the law says abortion is legal, it also means it is morally and ethically right.				
11. Mrs. Smith has 5 grown up children. She is 12 weeks pregnant. She wants to abort the child because her family cannot afford to have another baby. For given reasons, she should be allowed to abort the child.				

Abortion Attitude Scale Test-retest Reliability

Items	Strongly Disagree (1)	Disagree (2)	Agree (3)	Strongly Agree (4)
12. Mrs. Smith found out that her baby in the womb has a genetic disorder. In this case it is reasonable to let the baby go through abortion (compassionate abortion).				
13. I believe that it is unfair for an unmarried woman to have to face the embarrassment of pregnancy as a result of sex before marriage or rape.				
14. I believe that after an abortion, a woman can have physical complications including death.				
15. I believe that after an abortion, a woman can have emotional, mental and spiritual difficulties.				
16. I believe that parenting and adoption are alternatives to abortion.				
17. I believe that the gender of the baby is determined only by the father.				
18. I believe that the partners (husband and wife or girlfriend and boyfriend) have mutual responsibility on making decisions on prolife or abortion.				
19. I believe that the current practice of gender selective abortion favoring baby boy is wrong.				
20. I believe that my religious book values the life of an unborn baby.				
21. I believe pro-life is the right to life of an unborn baby.				
22. I believe there is a great need of prolife education among Nepali students.				

Appendix C

Abortion attitude scale test retest report

Case Processing Summary			
		N	%
Cases	Valid	10	83.3
	Excluded[a]	2	16.7
	Total	12	100.0
a. Listwise deletion based on all variables in the procedure.			

Reliability Statistics	
Cronbach's Alpha	N of Items
.818	44

Appendix D

Letter Seeking Permission by the Advisor to the College Director in Nepal

September 20th, 2012
To Whom It May Concern:

My name is Chu-Yu Huang, Associate Professor at School of Nursing, Cedarville University, Cedarville, Ohio, USA. One of the nursing graduate student advisee that I supervise, Maya Shrestha, is interested in conducting a research study titled "*The impact of prolife education intervention on abortion attitude among Nepali students: a quasi experimental study*" in Nepal. The purpose of this study is *to determine the effect of prolife education intervention on abortion attitudes among Nepali college students 18 year-old and older.* This study will serve to fulfill the capstone requirement for Cedarville University's Master of Science in Nursing program. The purpose of this letter is to seek your permission for Maya Shrestha to conduct her study at your institution.

Upon receiving consents from the participants, an educational session focusing on prolife education will be provided. This educational session will last approximately an hour. The participants will be asked to complete a paper-and-pencil survey before the educational session and upon completion of the session with questions related to prolife attitude. Reponses to the survey will be reported in an aggregated form to protect the identity of the respondents. The data collected from this study will be kept in a locked cabinet for two years. It is our hope that this information can advance the knowledge about prolife in students and further the research.
Miss Shrestha's study is currently going through the approval process by Cedarville University's Institutional Review Board. Approval from the Cedarville University's IRB would be provided contingent on receiving documentation indicating approval from an official of the institution (e.g. signed permission document on letterhead). Your consideration is deeply appreciated.

Please contact Miss Maya Shrestha for questions related to this study via email mshrestha@cedarville.edu . Also, do not hesitate to contact me via email/phone call. Thank you.

Sincerely,
Chu-Yu Huang, RN, PhD
Associate Professor
Assistant Dean, Director of MSN Program
School of Nursing
Cedarville University, Cedarville, Ohio USA
937-766-7726
huangc@cedarville.edu

Appendix E

Letter Seeking Permission by the Researcher to the College Directors in Nepal

October 2nd, 2012
College Director,
Kathmandu, Nepal

Re: Permission to conduct the research project at your institution

Dear college director,

My name is Maya Shrestha, a current Master of Nursing student at Cedarville University, Ohio, USA. As a part of my graduation requirement, I am conducting the research project titled "The impact of prolife education intervention on abortion attitude among Nepali students: a quasi-experimental study" in Nepal. The purpose of this study is to determine the impact of prolife education intervention on abortion attitudes among Nepali college students of 18 year-old and older.

The purpose of this letter is to seek your permission to conduct the study among your students from the class at your institution any day from Dec 18th to January 7th at your convenience. For the research purpose, I need at least 80 student participants. My expected number of college students at your college is at least 30 male and female students, aged 18 year-old and older, who can understand written English and can communicate in English and are willing to participate in pretest, intervention and posttest sessions. This one class session will last for about an hour. However, the students will have freedom to decline from the study if they choose not to participate. Information that is obtained in connection with this study and that can be identified with the students will remain confidential and will be disclosed only with participant's permission. Confidentiality will be maintained by means of an identification number instead of student's name. The study findings will be used for education and research publication purpose. This is non-funded research project and I will have no direct benefit. It is my hope that at the end of the session, participants will gain knowledge in making an informed decision in choosing prolife.

I humbly request you to give me an opportunity to conduct my research project at your institution. Upon receiving a formal letter of approval from you, I will submit the Institutional Review Board application to the Cedarville University. Attached is the letter from my adviser Dr. Huang at Cedarville University. Please let me know if you have any questions. I look forward to hearing from you soon.

Sincerely,
Maya Shrestha
434 534 7007
mshrestha@cedarville.edu

Appendix F

Letters of Permission from Colleges in Nepal

October 16, 2012

To whom it may concern

This is an approval to Maya Shrestha, a current Master of Nursing student at Cedarville University, Ohio, USA to conduct a research project on title "The impact of pro-life education intervention on abortion attitude among Nepali students: a quasi-experimental study" in Nepal. The college has no objection and will have full support in conducting research by providing the right number of samples (students) as well as the required amenities.

Regards
Binod Aryal
Program coordinator
Morgan International College
Basundhara-3, Kathmandu.
abaryal@gmail.com

NOBEL COLLEGE
Affiliate to Pokhara University

GPO Box: 10420, Sinamangal, Kathmandu, Nepal, Tel: 4110525,4110590,2062660, Fax No.: 4110880, principal@nobelcolleg.edu.np

Date: September 6, 2012

To Whom It May Concern

It is my understanding that Ms. Maya Shrestha, student of Cedarville University, will be conducting research study at Nobel College on "**The effect of prolife education intervention on abortion attitude among Nepali students: a quasi experimental study**" as a part of her graduation requirement. Ms. Maya has informed me about the design, methodology, targeted population and time frame of the study.

I appreciate this effort and will provide necessary assistants for the successful conduction of this study. If you have any questions, please feel free to contact me. I can be reached at principal@nobelcollege.edu.np.

.....

Pramod Singh G.C.

Principal

Appendix G

Consent to Participate in the Research Study for College Students

TITLE: Impact of pro-life education on abortion attitude in Nepal

I, ----------(your name)agree to take part in a research study titled, **the impact of prolife education on abortion attitude in Nepal** which is being conducted by Maya Shrestha, School of Nursing, Cedarville University, phone number 434 534 7007 under the direction of the School of Nursing, Cedarville University. My participation is voluntary; I can refuse to participate or stop taking part at any time without giving any reason, and without penalty. I can ask to have information related to me returned to me, removed from the research records or destroyed.

PURPOSE OF THE STUDY

The purpose of this study is to explore the impact of pro-life education on abortion attitude among Nepali college students.

POTENTIAL BENEFITS:

1. Benefits to the researcher:
- The researcher will have no direct benefits from the study.

1. Benefits to the participants and/or the society:
- Participants will gain knowledge about pro-life and abortion
- The study will assist students in inform decision making on reproductive health
- The study findings will help to further the research
- This study does not affect any class grade

PROCEDURES:

If you volunteer to participate in this study, you will be asked to do the following things:

1. Provide the voluntary permission to participate in pretest, education and posttest sessions through signing a participation consent form.
2. Complete a 22 items pro-life attitude survey plus provide demographic data which includes information like age, gender, education, etc.
3. Listen to a pro-life education session
4. Complete a 22 items pro-life attitude survey.
5. The total time commitment is about an hour.

POTENTIAL RISKS AND DISCOMFORTS

Some participants may experience emotional distress during the education. Participants have freedom to leave and withdraw from the study at any time. The researcher and a local pro-life resource will be available for any question or counseling.

COMPENSATION FOR PARTICIPATION

You will not receive any payment or other compensation for participation in this study.

CONFIDENTIALITY

All identifying information obtained in this study will be confidential and will be kept in a locked filed cabinet. Any data collected from this study will be presented in aggregate only. On all data collection tools you will be identified by your participation number and you're your name. Aggregate data will be disseminated in an American Nursing Journal.

Information that can identify you individually will not be released to anyone outside the study. The survey forms will be protected in a locked cabin for 2 years and will be shredded afterwards. The study findings will be used for education and publication purpose.

PARTICIPATION AND WITHDRAWAL

You can choose whether or not to be in this study. If you volunteer to be in this study, you may withdraw from the study session as any time without consequences of any kind. There is no penalty or grade deduction if you withdraw from the study.

FURTHER QUESTIONS:

If you have any questions or concerns about the research, please feel free to contact

Maya Shrestha, BSN, RN
School of Nursing
Cedarville University,
Cedarville, Ohio, 45314
434 534 7007
mshrestha@cedarville.edu

FINAL AGREEMENT AND CONSENT FORM
My signature below indicates that the researchers have answered all of my questions to my satisfaction and that I consent to volunteer for this study. I have been given a copy of this form.

CONSENT FORM:
Please sign one copy and return to the researcher. Keep another copy for your record.
Name of Researcher:_____ Date:_____
Signature: _____
Telephone:_____ Email:_____
Name of Participant_____ Date:_____
Signature:_____

RIGHTS OF RESEARCH SUBJECTS:
Cedarville University Institutional Review Board has reviewed my request to conduct this project. If you have additional questions or problems regarding your rights as a research participant please contact Andrew Runyan, Institutional Review Board, Cedarville University, Cedarville, OH 45314; Telephone (937)766-3840. E-mail Address IRB@Cedarville.edu